

[1] EC-TYPE EXAMINATION CERTIFICATE

[2] Equipment or Protected System Intended for use
in Potentially explosive atmospheres
Directive 94/9/EC

- [3] EC-Type Examination Certificate Number: **Nemko 12ATEX1315X** Issue **0**
- [4] Equipment or Protective System: **IS Battery Backup Unit – CT502001**
- [5] Applicant/ Manufacturer: **Nautitech Mining Systems Pty Ltd**
- [6] Address: **Unit 3, 9 Packard Avenue
Castle Hill, NSW, 2154
Australia**
- [7] This equipment or protective system and any acceptable variation thereto is specified in the schedule to this certificate and the documents therein referred to.
- [8] Nemko AS, notified body number 0470 in accordance with Article 9 of Council Directive 94/9/EC of 23 March 1994, certifies that this equipment or protective system has been found to comply with the Essential Health and Safety requirements relating to the design and construction of equipment and protective systems intended for use in potentially explosive atmospheres given in Annex II to the Directive.
- The examination and test results are recorded in confidential report no. 218469
- [9] Compliance with the Essential Health and Safety Requirements has been assured by compliance with:
CENELEC EN 60079-0: 2012, CENELEC EN 60079-11: 2012 & CENELEC EN 50303 : 2000
- [10] If the sign “X” is placed after the certificate number, it indicates that the equipment or protective system is subject to special conditions for safe use specified in the schedule to this certificate.
- [11] This EC-TYPE EXAMINATION CERTIFICATE relates only to the design, examination and tests of the specified equipment or protective system in accordance to the directive 94/9/EC.
Further requirements of the Directive apply to the manufacturing process and supply of this equipment or protective system. These are not covered by this certificate.
- [12] The marking of the equipment or protective system shall include the following:

**I M1****Ex ia I -20°C ≤ Ta ≤60°C**

Oslo, 2012-11-22



Asle Kaastad
Certification Manager, Ex-products

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[13] Schedule

[14] EC-TYPE EXAMINATION CERTIFICATE No Nemko 12ATEX1315X Issue 0

[15] Description of Equipment or Protective System

The NTMS IS Battery Backup Unit provides a source of power to devices in a hazardous environment. The unit employs intrinsically safe concepts (Ex ia) to ensure continued safe operation in the presence of methane gas.

Type designation:

IS Battery Backup Unit – CT502001

Safety Parameter:

See item 17.

Ingress Protection Code:

IP 20

[16] Report No. 218469

Descriptive Documents

Name/Title	Drawing No.	Rev.	Date	Sheets
CONTROL BOARD – IS BATTERY BACKUP	ExPB502001-A	6	2012/02/01	7
BATTERY BOARD – IS BATTERY PACK	ExPB502002-A	6	2012/01/04	5
CONTROL BOARD – Exia BATTERY PACK	ExSH502001-A	6	2012/02/01	1
BATTERY BOARD – IS BATTERY PACK	ExSH502002-A	6	2012/02/01	1
LABEL – IS BATTERY BACKUP	ME5020-0-25-013	A	2012/11/08	1
FINAL ASSEMBLY – IS BATTERY BACKUP	ExME5020-2-99-001-A	B	2012/01/05	1
WIRING DIAGRAM-Exia BATTERY BACKUP	WD502001-A	B	2011/12/28	1

Certificate History and Associated Nemko Reports

Issue	Date	Report	Description
0	2012-11-22	218469	Prime Certificate released

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[17] Special Conditions for Safe Use

The following parameters are to be taken into account in the installation. The apparatus is only to be connected to one source of power connected to **Connection A**.

Connections A

Ui: 8,9V	Uo: 9,3V
Ii: 2,8A	Io: 3,27A
Pi: 12,5W	Po: 5,34W
Ci: Negligible	Co: 1000 μ F
Li: Negligible	Lo: 0,036mH
	L/R: 61 μ H/ Ω

Connections B

Uo: 8,9V	
Io: 3,12A	
Po: 6,23W	
Ci: 3,6 μ F	Co: 1000 μ F
Li: Negligible	Lo: 0,043mH
	L/R: 64 μ H/ Ω

Connections C

Uo: 9,3V	
Io: 52mA	
Po: 109mW	
Ci: Negligible	Co: 1000 μ F
Li: Negligible	Lo: 39mH
	L/R: 14,2mH/ Ω

The above load parameters apply where:

- The external circuit contains no combined lumped inductance Li and capacitance Ci greater than 1% of the above values. Or:
- The inductance and capacitance are distributed as in a cable. Or:
- The external circuit contains only lumped inductance or only lumped capacitance in combination with a cable.

In all other situations, e.g. the external circuit contains combined lumped inductance and capacitance, up to 50% of each of the inductance and capacitance values is allowed.

[18] Essential Health and Safety Requirements

See item 9

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